



United States Coast Guard
Seventeenth District

Semper Paratus



alaska BEAR

The Seventeenth District
Online Magazine

Air Station Kodiak Upgrades Rescue Helicopters

Feature by PA2 Christopher McLaughlin

Coast Guard Air Station Kodiak's fleet of three HH-65 Bravo Dolphin helicopters under went modernization in March 2007 to become the HH-65 Charlie Dolphin. The first re-engined HH-65Cs were delivered to Coast Guard Air Station Atlantic City, N.J., in April 2004.



KODIAK, Alaska – An HH-65C helicopter from Coast Guard Air Station Kodiak is strapped to the deck of the Coast Guard Cutter Chase during an Alaska patrol April 10, 2007. Official Coast Guard photo by Petty Officer Christopher D. McLaughlin.

The upgrade to the Turbomeca Arriel 2C2-CG turbo shaft engines brings to the table a safer

more reliable aircraft. The conversion process took place at the Coast Guard's Aircraft Repair and Supply Center in Elizabeth City, N.C.

The helicopter's engines and control panels were refurbished. This was done to make the aircraft safer and give the pilots a simpler workload in monitoring engine to power demands during flight. As of March 21, 75 HH-65C helicopters have been delivered to Coast Guard units all over the United States. The remaining nine HH-65C helicopters are now scheduled to be delivered in late June 2007. The two new engines on the aircraft have more horse-power and are much more simple in design, which makes them easier to maintain.

"The reason for the upgrade was primarily safety. Basically our old engines were becoming outdated. These engines stepped us up to the modern age of technology," said Petty Officer 1st Class Brandon Wallace, an HH-65C helicopter flight mechanic with Air Station Kodiak.

The most significant aspect of the upgrade was the replacement of the HH-65's engines. The new engines will require less

maintenance and improve reliability.

“They’re a little bit smaller and tighter and they’re the original design of engines that were put on this aircraft when it was made,” said Lt. Daniel Long, an HH-65C helicopter pilot with Air Station Kodiak.

An added feature to the Charlie model is the pilot's ability to flip a main rotor switch to increase the rotations per minute of the main rotor system, which also increases the RPM of the tail rotor.

“When you flip the switch it bumps the RPM up by 10, which doesn’t seem like a lot but it really does make a lot of difference,” said Long. “The aircraft feels a lot tighter and more responsive all the way around. We’re required to use it anytime we’re in a hover higher than ten feet. It gives you a little more lift out of the aircraft.”

An example of an instance you would use this feature is anytime you could potentially be in a situation of losing an engine. If the pilots increase the rotor’s RPM it gives the aircraft more lift and the crew a better chance of flying out from an engine failure. Essentially, it becomes a risk management tool in the field. When the older Bravo models were in use, you would have to make a controlled decent into the water during an engine failure, Wallace said.



KODIAK, Alaska – Coast Guard Petty Officer Stephen Schmid, right, an HH65C flight mechanic from Air Station Kodiak sets the blades of an HH-65 Charlie while deployed aboard the Coast Guard Cutter Chase during an Alaska patrol April 10, 2007. Official Coast Guard photo by Christopher D. McLaughlin.

“In a lot of situations we were accepting a higher level of risk with the Bravo because of the amount of power you could get out of the engines in a single engine situation,” Long explained. “If you lost one in the Bravo it was only capable of putting in half the torque. In the Charlie model you get 100 percent of the torque.”

The HH-65C is a new piece of machinery the pilots and crew are learning to use. “One of the perceptions of the Charlie model is that it’s got a lot of power now,” Long said.

“It’s a learning curve for the whole HH-65 community,” said Long. “We are able to take off a little bit heavier with the Charlie model because its max gross rate has been increased and we are able to put more fuel into the aircraft and operate with heavier weights. The most important aspect, no doubt, is the safety margin we now have upon loss of another engine. Each one of these engines puts out significantly more horse power.”

“They are new and improved,” said Wallace. “Strictly because of technology and power.”

The primary mission for HH-65Cs in Alaska is to deploy on Coast Guard Cutters during patrols.

“The advantages to the Charlie model is the reliability of the engines and the improved performance of taking off and landing from the deck of a ship,” said Long. “This is when reliability is key.”

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